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09/010,801 01/22/98 HAMBURG

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EXAMINER

COLBERT, F

ART UNIT

PAPER NUMBER

2771

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/010,801

Applicant

Hamburg et al

Examiner

Ella Colbert

Group Art Unit
2771



☒ Responsive to communication(s) filed on Jan 22, 1998

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire Three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-44 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-44 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 recites the limitation "interesting operation" in line 6, page 20. Claim 3 recites the same limitation in lines 7 and 10, page 20 and lines 16 and 21, page 21. Claim 4, 8, 37, and 38 have a similar problem. There is insufficient antecedent basis for this limitation in the claim.

Claim Objections

3. Claims 22 and 43 are objected to because of the following informalities:

Claim 22 recites the limitation "designate any arbitrary one" in line 7, page 26. The Applicants' usage of "designate any arbitrary one" is not clear to the Examiner and cannot be determined in line 5, page 4 of the Specification. Claim 43 has a similar problem. Clarification is requested.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-18 and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima (US 5,659,747).

In regard to claim 1, “maintaining in a memory a state history of a document for storing document states”(column 1, lines 26-34) and “whenever an interesting operation has occurred, automatically capturing the state of the document as it exists after operation and adding the captured state to the state history” (column 1, lines 35-53 and column 6, lines 43-45).

In regard to claim 2, Nakajima did not teach “the memory comprises a disk file,” but it would have been obvious to a person of ordinary skill in the art of memory at the time the invention was made to have the memory comprise a disk file because when the computer is turned off the ROM (Read Only Memory) goes blank; any data in it must be copied to a disk or tape if it is to be saved.

In regard to claim 3, “the state history includes states of the document and the order in which the stored states were automatically added to the state history” (column 2, lines 39-45), “the state history is displayed to a user as a list of document states shown in their stored order” (column 4, lines 15-37), “an operation is classified as an interesting operation if it changes the state of the document” (column 4, lines 38-58), “a state is added to the state history only if the operation creating the state is classified as an interesting operation and not otherwise” (column 4, lines 59-67 and column 5, lines 1-14), “performing a step backward operation by installing as the current state of the document a state stored in the state history, all backward operations place the document in a state that occurred immediately after an interesting operation” (column 1, lines

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29-34, column 2, lines 9-14, and figures 5a and 5b), and “performing a step forward operation by installing as the current state of the document a state stored in the state history, all step forward operations place the document in a state that occurred immediately after an interesting operation” (column 2, lines 15-20 and lines 29-35, and figures 6a and 8a).

In regard to claim 4, “the list of document states displayed to the user comprises a list of items, each item representing a state of the document that existed after an interesting operation and that can be recovered with a step backward operation in the application” (**column 4, lines 59-67 and column 5, lines 1-5 and lines 15-24**) and “the list of document states displayed to the user comprises a list of items, each item representing a state of the document that existed after an interesting operation and that can be recovered directly by selecting the item” (**column 25, lines 25-40**).

In regard to claim 5, “the application provides a tool operable under user control to obtain source material from any state in the state history and apply it to a current state of the document” (**column 4, line 1-9**). Najkajima did not teach “the application is a digital graphics program operable to create and revise images in digital form” and “the images are raster images,” but it would have been obvious to a person of ordinary skill in the art of digital graphics programs at the time the invention was made to create and to revise the images in digital form as raster images because the graphics program can decide what action to be taken with the image being displayed on the visual display representing any kind of document such as a scanned picture in a bitmapped

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format or any other type of document (see Krause et al (5,757,372) column 2, lines 12-67 and column 3, lines 1-3).

In regard to claim 6, “the application enables a user to select any item in the display list of items and cause the application to create a new document having the document state corresponding to the selected item” (**column 6, lines 2-12**). Nakajima did not explicitly teach “creating a new document having the document state corresponding to the selected item,” but it would have been obvious to a person of ordinary skill in the art of document creation at the time the invention was made to have document state correspond to the selected item because the operating system application program creates a document for each associated command that is executed in the application program linking the command together in a sequential list (column 6, lines 31-45).

In regard to claim 7, “each of the captured states in the state history maintains the state data in essentially its original form whereby the captured state data is suitable for immediate use in other operations” (**column 3, lines 20-48**).

In regard to claim 8, “maintaining a first history of interesting operations and a second history of all operations requested by a user, the second history but not the first history including operations global to the state of the application” (**column 1, lines 29-34 and lines 39-48**).

In regard to claim 9, “receiving from the user a sequence of commands to change the document” (**column 3, lines 25-28**), “changing the document state in response to each command” (**column 1, lines 39-48**), “for each document state added to the state history, adding a

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corresponding entry to a history list displayed to the user on a computer-controlled display device operated as part of a graphical user interface” (**column 5, lines 1-14**), and “in response to a user action stepping backward to an item in the history list, updating the document to have the corresponding document state saved in the state history” (**column 5, lines 15-24**). Nakajima did not teach “adding the changed document state to a state history maintained in a computer-readable memory device each time the document state is changed,” but it would have been obvious to a person of ordinary skill in the art of changing the state of a document at the time the invention was made to have a state history maintained in a computer readable memory device because when changes are made to a document the changes are stored in volatile memory and must be saved to a more permanent memory such as magnetic tape to prevent loss in the event of a software or hardware error causing the computer to freeze.

In regard to claim 10, Nakajima did not teach “the state history and the history list are limited to storing a preset number of items and excess items are scrolled off the top of the list as new items are added,” but it would have been obvious to a person of ordinary skill in the art of limited storage for state histories and history list at the time the invention was made to have a preset items and excess items scrolled off the top of the list when new items are added because each action is stored sequentially in the history list and to undo an action, the last action stored is scrolled off the list and the application takes whatever measures are required to undo an action (see Matheny et al (5,583,982) column 35, lines 8-40).

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In regard to claim 11, “the state history is stored in a region of memory and the oldest document states in the state history are discarded when free space in the region runs low” (**column 1, lines 26-34**).

In regard to claim 12, “the oldest document states are found and discarded by a memory management process” (**column 4, lines 44-58**). Nakajima did not teach “a memory management process,” but it would have been obvious to a person of ordinary skill in the art of memory management at the time the invention was made to have a process because a computer system can only maintain a limited amount of memory for data storage and the oldest data is usually deleted (discarded).

In regard to claim 13, “a command to change the document that comes after a step backward command to a selected item in the history list causes the items after the selected item to be deleted from the history list and the corresponding document states to be deleted from the state history” (**column 4, lines 59-67**).

In regard to claim 14, “a command to change the document that comes after a step backward command to a selected item in the history list does not cause the items after the selected item to be deleted from the history list and adds a new item to the end of the history list and a new document state to the state history” (**column 4, lines 15-67**).

In regard to claim 15, “enabling a user interface gesture on the history list to create a new document from a document state from the state history” (**column 5, lines 1-15**). Nakajima did not teach “a user interface gesture,” but it would have been obvious to a person of ordinary skill

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in the art of user interface at the time the invention was made to have a gesture because the user selects an icon and performs an operation on the list to create a document.

In regard to claim 16, “keeping a history list” (**column 3, lines 25-30**), “going back to a previous state from the history list, being a state created after the previous state, as a source of data for an operation” (**column 5, lines 15-24**), and “performing the operation with the future data on the previous state” (**column 5, lines 47-65**).

In regard to claim 17, “keeping a history of document states created by a user” (**column 1, lines 41-48**) and “enabling the user to step backward and forward through the history and thereby to alter the state of the document to be any of the document states in the history” (**column 2, lines 39-45, column 3, lines 56-67, and column 4, lines 1-7**). Nakajima did not teach “enabling the user to discard any of the history,” but it would have been obvious to a person of ordinary skill in the art of keeping a document history at the time the invention was made to enable the user to discard any of the history because the history list of a document and the commands performed should be updated frequently by the user.

In regard to claim 18, “keeping a history of document states created automatically whenever a user command to the application changes the state of a document” (**column 1, lines 12-22**) and “enabling the user to designate any one of the document states in the history” (**column 2, lines 39-45**). Nakajima did not teach “enabling the user to discard any user-selected set of the document states in the history and to install the designated state as the current state of the document,” but it would have been obvious to a person of ordinary skill in the art of

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document states at the time the invention was made to enable the user to discard any of the history and to install a designated state as the current state because the history of a document needs to be updated and any unneeded history relating to the document should be discarded (deleted) by the user since the user knows the sequence of the commands performed.

In regard to claim 37, this claim is rejected on grounds corresponding to the rejection given above for claim 1.

In regard to claim 38, this claim is rejected on grounds corresponding to the rejection given above for claim 8.

In regard to claim 39, this claim is rejected on grounds corresponding to the rejection given above for claim 9.

In regard to claim 40, this claim is rejected on grounds corresponding to the rejection given above for claim 16.

In regard to claim 41, this claim is rejected on grounds corresponding to the rejection given above for claim 17.

In regard to claim 42, this claim is rejected on grounds corresponding to the rejection given above for claim 18.

6. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima in view of Bristol (US 6,018,342).

In regard to claim 19, Nakajima did not teach "saving the history when the document is closed on a long-term storage medium, whereby the history may be restored when the document

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is later opened and across invocations of the application.” Bristor taught this in **column 12, lines 3-13 and column 13, lines 24-28**. It would have been obvious to a person of ordinary skill in the art of saving document histories at the time the invention was made to save the history on a long-term storage medium when the document is closed and to combine Nakajima’s document history states with Bristor’s saving the document history because the document history is stored in a history database (a computer storage medium) for later retrieval by a user.

In regard to claim 20, Nakajima did not teach “the saved history resides in the document with final document data.” Bristor taught this in **column 14, lines 64-67 and column 15, lines 1-8**. It would have been obvious to a person of ordinary skill in the art of saved histories at the time the invention was made to have the history reside with the final document data and to combine Nakajima’s history list with Bristor’s saved history residing in the document with the document data because the previously generated data is represented to the user and associated with the stored (saved) data.

In regard to claim 21, Nakajima did not teach “the saved history resides in a long-term data repository independent of the original document.” Bristor taught this in **column 17, lines 44-67 and column 18, lines 1-3**. It would have been obvious to a person of ordinary skill in the art of saved histories at the time the invention was made to have the history reside in a long-term data repository and to combine Nakajima’s captured states with Bristor’s saved history residing in a long-term data repository because the data which are designated by the user and could include a saved history.

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 22-25, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima (US 5,583,982).

In regard to claim 22, “identifying for the user on a display device a set of states that the document has been in by operation of the application” (**column 2, lines 52-53 and column 3, lines 8-23**) and “enabling the user to designate any arbitrary one of the identified states” (**column 3, lines 31-36**). Nakajima did not disclose “identifying to the user on a display device a set of states,” but it would have been obvious to a person of ordinary skill in the art of displaying states at the time the invention was made to identify to the user the states on a display device because the user will be able to see what commands have been entered and what operations have been performed on the document.

In regard to claim 23, Nakajima did not teach “displaying the document in a user interface window the document being a digital image,” but it would have been obvious to a person of ordinary skill in the art of displaying documents at the time the invention was made to display the

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document in a user interface window because the user can perform operations on the displayed document image by selecting the icons (pictures) with a mouse.

In regard to claim 24, “displaying user-interface elements for applying filters to the digital image” (**column 3, lines 61-65**). Nakajima did not teach “applying filters to a digital image,” but it would have been obvious to a person of ordinary skill in the art of applying filters at the time the invention was made to apply the filters to a digital image because many of the image processing functions are built into paint and photopaint programs and applied as filters to the image (see Krause et al (5,757,372) column 2, lines 52-63).

In regard to claim 25, “installing the designated state as the current state of the document in response to a user command” (**column 2, lines 39-45**).

In regard to claim 43, this claim is rejected on grounds corresponding to the rejection given above for claim 22.

In regard to claim 44, Nakajima did not explicitly teach providing the user a first undo command function that operates with reference to the first history and a second undo command function that operates with reference to the second history;” however, it would have been obvious in view of his teaching of first and second user undo commands (as taught in the background section **column 1, lines 26-34**).

9. Claims 26-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima in view of Matheny et al (US 5,583,982), hereafter Matheny.

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In regard to claim 26, Nakajima did not teach “providing the user an editing tool having the designated state as a document state operand.” Matheny taught this in **column 13, lines 7-33**.

It would have been obvious to a person of ordinary skill in the art of editing tools at the time the invention was made to provide the user with an editing tool having a designated state and to combine Nakajima’s set of states with Matheny’s editing tool because the user can use the tool to give editing commands provided by the system such as cut, copy, paste, undo, and redo.

In regard to claim 27, Nakajima did not teach “providing the user an delete tool for deleting the designated state from the set of states.” Matheny disclosed this in **column 3, line 18 and column 5, lines 37-40**. It would have been obvious to a person of ordinary skill in the art of delete tools at the time the invention was made to provide the user with a delete tool having a designated state and to combine Nakajima’s identification of states with Matheny’s delete tool for deleting a designated state because by a mouse action the user can undo a command after the command has been performed on a document.

In regard to claim 28, Nakajima did not teach “the set of states is identified by displaying a scrollable list of elements each identifying one of the states in the set.” Matheny taught this in **column 23, lines 14-25**. It would have been obvious to a person of ordinary skill in the art of displaying a scrollable list of elements at the time the invention was made to have the list of elements identify one of the states in the set and to combine Nakajima’s identification for the user on a display device a set of states with Matheny’s set of states identifying a display of scrollable

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list of elements because each menu contains a scrollable list of the menu items and the command reflects its current appearance when displayed to the user.

In regard to claim 29, Nakajima did not teach “the list of elements are ordered by the time the corresponding states were created.” Matheny taught this in **column 23, lines 26-45**. It would have been obvious to a person of ordinary skill in the art of lists of elements at the time the invention was made to have the list of elements ordered by the time the corresponding states are created and to combine Nakajima’s display of user-interface elements with Matheny’s list of elements because the steps carried out are in (1) order of creation command, (2) adding a menu item, and (3) marking the menu’s appearance to correspond to the menu item.

In regard to claim 30, Nakajima did not teach “the designation and installation are performed in response to a single command. Matheny taught this in **column 23, lines 53-67 and column 24, lines 1-2**. It would have been obvious to a person of ordinary skill in the art of commands at the time the invention was made to have the designation and installation performed in response to a single command and to combine Nakajima’s installing the designated state as the current state with Matheny’s designation and installation being performed in response to a single command because the command looks at whatever the system state it wants to and returns whether it is inactive based on whether a particular window is in front or a particular object is selected (column 23, lines 61-66).

In regard to claim 31, Nakajima did not teach “enabling the user to make a gesture on a user interface indicating a sequence of displayed state identifiers and responding to the gesture by

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displaying the document in the states indicated as the gesture is made.” Matheny taught this in **column 24, lines 40-49**. It would have been obvious to a person of ordinary skill in the art of making a gesture on a user interface at the time the invention was made to have the gesture responded to by displaying the document states and to combine Nakajima’s designated state as the current state with Matheny’s user interface indicating a sequence of displayed state identifiers because when a user performs operations an icon is selected and the document that is presented is identified by its present state.

In regard to claim 32, Nakajima did not teach “enabling the user to modify the document state after the installing step” and “adding the document state resulting from the modification to the set of states identified on the display device.” Matheny taught this in **column 8, lines 36-46**. It would have been obvious to a person of ordinary skill in the art of enabling a user to modify the document at the time the invention was made to have an installing step and to combine Nakajima’s designated state being the current state with Matheny’s enabling the user to modify the document and adding the document state resulting from the modification because the user creates a state for each command in the system and the document is displayed for the modification of the document.

In regard to claim 33, Nakajima did not teach “the set of states is displayed in order of creation of the states in the set.” Matheny taught this in **column 3, lines 20-23 and column 23, lines 30-37**. It would have been obvious to a person of ordinary skill in the art of displaying the set of states at the time the invention was made to have set of states displayed in order of creation

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and to combine Nakajima's identifying a set of states with Matheny's display of the set of states in order of creation because the commands are added to the menu in order of creation of the menu item from a command and displayed to the user in that order.

In regard to claim 34, Nakajima nor Matheny taught "the document is a digital image," but it would have been obvious to a person of ordinary skill in the art of documents at the time the invention was made to have the document as a digital image because the image being displayed can represent any kind of a document such as a scanned picture in a bitmapped format or any other type of document that may be represented on a computer screen (see Krause et al (5,757,372) column 2, lines 17-21).

In regard to claim 35, Nakajima did not teach "providing a step backward and a step forward command for the user to execute to navigate the set of states" and "providing a separate undo and redo command for the user to undo and redo commands entered by the user." Matheny taught this in **column 14, lines 42-54**. It would have been obvious to a person of ordinary skill in the art of stepping backward and stepping forward at the time the invention was made to have the user to execute to navigate the set of states and to combine Nakajima's set of states with Matheny's providing a separated undo and redo command entered by the user because the user often toggles between the two states of a document and compares a result of the command.

In regard to claim 36, this claim is rejected on grounds corresponding to the above for rejected claim 35.

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In regard to claim 44, Nakajima did not explicitly teach providing the user a first undo command function that operates with reference to the first history and a second undo command function that operates with reference to the second history;" however, it would have been obvious in view of his teaching of first and second user undo commands (as taught in the background section **column 1, lines 26-34**).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DeAguiar et al (Re.36,145) taught digital images stored on secondary storage mediums such as magnetic disk.

Hudson et al (5,990,906) taught a graphical programming system with an undo feature.

Krause et al (5,757,372) taught multiple nonlinear undo buttons and a method for saving prior versions of a document.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is (703)308-7064. The examiner can normally be reached Monday through Thursday from 6:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached on (703)305-9707.

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703)308-9051, (for formal communications intended for entry).

Or:

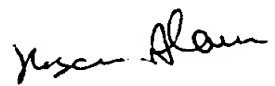
(703)305-9731 (for informal or draft communications, please label

“PROPOSED” or “DRAFT”).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Virginia., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703)308-9600.

Colbert
February 25, 2000


Hosain T. Alam
Primary Examiner
Sector 2700